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09/634,908

a shank axially extending from said head means at a proximal end to a distal end terminating at a tip, said shank comprising a proximal portion defining a first diameter adjacent said shank proximal end and a distal portion having a second diameter less than said first diameter adjacent said shank distal end, a first thread extending helically along a portion of said proximal portion and a second thread extending helically along a portion of said distal portion, said shank distal end defining material transfer means within said second diameter extending from a location adjacent said tip to a location adjacent said second thread;

a coating comprising a resin or an adhesive in a micro-encapsulated form disposed over at least one of the group consisting of said shank distal portion, said shank proximal portion, said first thread and said second thread; and

self-drilling means adjacent said shank tip for drilling into a support structure.

A clean copy of the amended claim is attached.

REMARKS

Applicant has amended claim 1 to more precisely define the invention. Upon entry of the amendment, claims 1-20 are presented for reconsideration.

Applicant's invention is directed to a new and improved self-drilling fastener for mounting an object to a masonry structure in an efficient operation

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that is resistant to loosening and provides a concrete fastener capable of mechanical and bonding engagement of a high integrity. It is apparent from the first Office Action that the Examiner has either failed to properly appreciate Applicant's invention and/or has failed to properly appreciate the limitations of the cited art, including the manner in which it can be properly combined and applied to Applicant's invention.

While all of the cited references appear to be related generally to fasteners, the various tasks and specific objectives of each of the fasteners (as well as the properly disclosed fastener structures), cited by the Examiner preclude the combining of the references in the fashion set forth by the Examiner in rejecting claim 1.

First and most significantly, the primary Waud reference is addressed to a wholly different application and problem than Applicant's invention. A proper review of the Waud reference shows that it is specifically directed to a fastener for use with panels comprising insulation material bound by sheet material on one side and a thicker purlin material on the other side. The problems presented by the teaching of the Waud reference are to overcome the problem of crushing foam-insulating material and to vertically stabilize the entrance of the fastener through a thin sheet of material to facilitate entry of the fastener in pre-drilled holes. There is absolutely nothing whatsoever in the teaching of the Waud reference that would suggest the necessity in any fashion, nor would it be at all desirable, to have a coating of adhesive in micro-encapsulated form or a resin on the fastener. The Waud reference is directed toward preventing cocking of the

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fasteners that pass through a large foam material and to prevent the fasteners from passing through such material so that the drilling point is broken when it reaches the thick purlin material. It is requested that the Examiner specifically point out anywhere in the Waud reference where Waud would teach or suggest in any fashion, even the desirability of an adhesive or resin coating.

Applicant respectfully submits that there is no proper basis for combining the Waud insulation fastener with the Nystrom truss fastener assembly. It is readily apparent that the nature of the fastening tasks are wholly different in the Waud and Nystrom references, and there is no motivation whatsoever as to why one would seek to combine the references. Moreover, it is clear that any analogous coating of the Nystrom reference, which is a sealant adhesive coating, provides adhesion at the joint directly under the fastener head. It is employed to provide good adhesion to painted surfaces and adjacent threads upon curing. The coating of Applicant's invention is for a wholly different function and application than the Nystrom fastener. For the fastener of Applicant's invention, the claimed structure causes the coating to mix with the resultant masonry dust mixture to bond the fastener to the masonry structure or for the resin to mix with the resultant masonry dust to effectively jam the fastener with the masonry. No such function is remotely suggested by the cited art. Neither the Waud nor Nystrom references, nor do any of the cited references teach the "material transfer means" which, upon fastener installation, transfers the masonry dust into the interaction with the coating.

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Claims 2-9 which depend on amended claim 1 or a claim dependent thereon are patentable at least for the reasons advanced for amended claim 1.

Applicant likewise respectfully traverses the Examiner's combination of the Waud and Nystrom references with the Wallace reference. There is simply no proper basis as to why one would be motivated by the Waud reference, or even the Nystrom reference, to combine the Wallace reference. The Wallace reference, to the extent that it can be understood in the context of Applicant's invention, merely relates to a method of making self-activating lock thread structures. There is, however, no teaching as to why such a structure would be desirable or even work in the Waud reference or in the Nystrom reference. The Nystrom sealant adhesive is placed at the underside of the fastener head. Accordingly, there is simply no proper basis for combining the references. In this regard, it should also be pointed out that it could not be regarded as an obvious design choice to use the thread lock micro-encapsulation because the masonry environment of Applicant's invention also clearly sets forth in the claim "material transfer means". The material transfer means transfers material which interacts with Applicant's inventive micro-encapsulated system or the resin.

Applicant further respectfully traverses the Examiner's rejection of claims 8 and 9 on the basis of the combination of Waud and Dixon et al. Applicant is unable to find any suggestion whatsoever in Waud of the need for an additional protuberance and respectfully requests the Examiner to specify any such suggestion or teaching.

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Independent claims 10 and 20 are patentable for the reasons previously advanced including the further reason that none of the references cited by the Examiner disclose a resin bead applied to said first intermediate portion (claim 10) and a bead comprising an epoxy resin applied to said first intermediate portion (claim 20).

Claims 11-19 which depend on claim 10 or claim 11 are patentable at least for the reasons advanced for claim 10.

Applicant also respectfully submits that there is no proper basis for combining with the Duffy et al reference for the reasons previously set forth for the deficiencies and lack of proper basis in for the proposed combination with the Nystrom and Wallace references.

Applicant also respectfully disagrees with the Examiner's assertion concerning the Duffy, et al reference. In this regard, there does not appear to be any teaching whatsoever as to a resin bead as such. Furthermore, there is absolutely no proper teaching whatsoever for the cardioid shaped configuration recited in claim 12, nor for the specific formulations of claims 13 and 14, nor for the spacing relationships recited in claim 19. Contrary to the Examiner's numerous bare assertions of "obvious design choice", Applicant has through extensive experimentation and tests invented a fastener which is not obvious in any fashion given the proper appreciation of the prior art.

For the foregoing reasons, it is respectfully submitted that all claims in the application as submitted are in condition for allowance. Accordingly, favorable reconsideration by the Examiner is respectfully solicited.



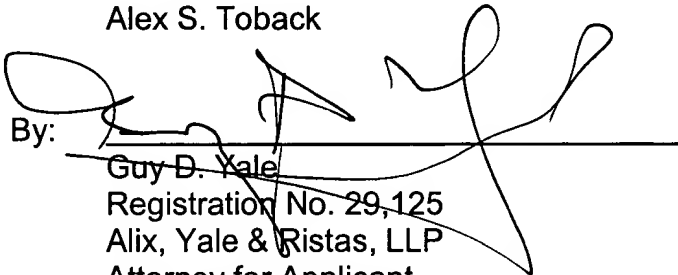
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